

PATENT APPLN. NO. 10/544,210
SUBMISSION UNDER 37 C.F.R. § 1.114

PATENT

REMARKS

Claim 19 has been amended to correspond to original claim 1 and to include the limitations of original claim 5 of the international application, of which the present application is the national stage in the U.S., and to recite that the battery has an end-of-charge voltage of at least 4.3 V. New claim 30 has been added to the application and corresponds to claim 19 as amended except that claim 30 recites an end-of-charge voltage of at least 4.4 V.

The end-of-charge voltage of at least 4.3 V recited in claim 19 is supported in the specification by the description in the paragraph bridging pages 2 and 3. The end-of-charge voltage of at least 4.4 V recited in claim 30 is supported in the specification by the description on page 20, lines 8-12.

The claims as amended are patentably distinct under 35 U.S.C. § 102 and 35 U.S.C. § 103(a) over the combination of Biensan et al., US 6,071,645 ("Biensan"), and Miyasaka, US 5,478,674, which were cited in the 35 U.S.C. § 103(a) rejection of claim 22 in the Final Office Action of February 25, 2010.

Biensan discloses only an end-of-charge voltage of 4.1 V (Col. 4, line 64). According to the present invention as defined by the amended claims, an end-of-charge voltage is at least 4.3 V.

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Accordingly, the present invention distinguishes from Biensan in end-of-charge voltage. Nothing in Biensan suggests that end-of-charge voltage is a result-effective variable.

Table 4 of the present specification in which the batteries were operated with an end-of-charge voltage of 4.2 V shows that the increasing rates of Example 1 in capacity retention after 100 cycles are in the range of only 0.5 to 1.5 % compared to Comparative Examples 1 and 2. In contrast, Table 2 of the present specification in which the batteries were operated with an end-of-charge voltage of 4.4 V shows that the increasing rates of Example 1 in capacity retention after 100 cycles are in the range of 3.5 to 67.4 % compared to Comparative Examples 1 and 2. Further, the increasing rate of Example 1 in capacity retention after 250 cycles is 53.5 % compared to Comparative Example 2. These results are material and unexpected from Biensan which, as noted above, discloses only an end-of-charge voltage of 4.1 V.

Withdrawal of the rejections previously made in this application and an allowance of the application are respectfully requested.

In the event that this paper is not considered to be timely filed, applicants hereby petition for an appropriate extension of

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time. The fee for any such extension may be charged to Deposit Account No. 111833.

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Respectfully submitted,

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